

REMARKS

I. Introduction

Claims 10 and 12-18 are pending in the present application. In view of the following remarks, it is respectfully submitted that claims 10 and 12-18 are allowable, and reconsideration is respectfully requested.

II. Rejections of Claims 10 and 12-18 under 35 U.S.C. §103(a)

Claims 10, 12, 14-16 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,243,277 ("Sun"), in view of U.S. Patent 5,986,354 ("Nagao") and the article "No Space? No Problem for these Tiny, Inductorless, Efficient, Low Noise, 1.8V and 1.5V, Step-Down DC/DC Converters," Bill Walter, Linear Technology Magazine, December 2001 ("Walter").

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent that the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 10 recites, in relevant parts, "a reserve energy accumulator to which a **charging voltage higher than the at least one internal normal d.c. voltage is applied by the high-voltage vehicle electric system** during regular operation, . . . and at least one step-

down regulator that steps down an input direct voltage applied thereto to the at least one internal normal d.c. voltage, wherein the step-down regulator does not include an inductor, and wherein in regular operation the motor vehicle electric supply voltage is applied directly by the high-voltage vehicle electric system via a diode as the charging voltage to the reserve energy accumulator and is also applied via a diode as an input direct voltage to the step-down regulator, and wherein the reserve voltage supplied by the reserve energy accumulator is applied directly as input direct voltage to the at least one step-down regulator in an emergency.” As clearly recited in claim 10, two different voltage levels are provided: internal normal DC voltage, and an input direct voltage/charging voltage which is higher than the internal normal DC voltage. In regular operation, the input direct voltage/charging voltage (“motor vehicle electric supply voltage [which] is applied directly by the high-voltage vehicle electric system”) is supplied directly to both the step-down regulator and the reserve energy accumulator, such that the internal normal DC voltage (lower voltage) is generated from the input direct voltage/charging voltage (higher voltage) by the step-down regulator and the reserve energy accumulator is charged.

In support of the rejection, the Examiner cites Sun as teaching the following:

a) “a step-down regulator (308) that steps down an input direct voltage applied thereto to the normal DC voltage (306) (see column 3, lines 43-46; since the regulator 308 converts the supplied voltage to the level required for the load, if the level required for the load is lower than the supplied voltage, the regulator will act as a step-down regulator);” and b) “in normal operation the normal DC voltage (306) is applied . . . as an input direct voltage to the step-down regulator (308).” (Office Action, p. 3). However, the above contentions are not only contradictory to one another, but also directly contrary to the present claimed feature that that the internal normal DC voltage (lower voltage) is generated from the input direct voltage/charging voltage (higher voltage) by the step-down regulator. Clearly, if the “input direct voltage” of Sun is higher than the “normal DC voltage (306),” which is required by present claim 10, than it is simply impossible that “in normal operation the normal DC voltage (306) is applied . . . as an input direct voltage to the step-down regulator (308).” For at least this reason alone, the teachings of Sun fail to support the Examiner’s obviousness conclusion.

In addition to the above, the teachings of Nagao and Walter clearly do not remedy the above-noted deficiencies of Sun, i.e., Nagao and Walter similarly fail to teach or suggest the

present claimed feature that that the internal normal DC voltage (lower voltage) is generated from the input direct voltage/charging voltage (higher voltage) by the step-down regulator.

For at least the foregoing reasons, claim 10 and its dependent claims 12, 14-16 and 18 are allowable over the combination of Sun, Nagao and Walter. Withdrawal of the obviousness rejection is requested.

Claims 13 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sun, Nagao, Walter and U.K. Patent GB 2,246,648 ("Lieu"). Applicant notes that claims 13 and 17 ultimately depend on claim 10. As noted above, the combination of Sun, Nagao and Walter clearly fails to render obvious parent claim 10. Furthermore, the teachings of Lieu clearly fail to remedy the deficiencies of Sun, Nagao and Walter as applied against parent claim 10. Therefore, the combination of Sun, Nagao, Walter and Lieu fails to render obvious dependent claims 13 and 17. Withdrawal of the obviousness rejection is requested.

CONCLUSION

It is therefore respectfully submitted that the pending claims 10 and 12-18 are allowable. All issues raised by the Examiner have been addressed, and an early and favorable action on the merits is solicited.

Respectfully submitted,

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